

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Time intervals experienced between first symptom recognition and pathologic diagnosis of breast cancer in Addis Ababa, Ethiopia: A cross sectional study
AUTHORS	Gebremariam, Alem; Addissie, Adamu; Worku, Alemayehu; Assefa, Mathewos; Pace, Lydia; Kantelhardt, Eva; Jemal, Ahmedin

VERSION 1 – REVIEW

REVIEWER	Amos Deogratius Mwaka College of Health Sciences, Makerere University, Uganda
REVIEW RETURNED	18-Jun-2019

GENERAL COMMENTS	<p>Dear Authors,</p> <p>This is a very well written manuscript with potential to contribute to better understanding of patient and diagnostic intervals among patients with breast cancer.</p> <p>I shall not burden you with issues of low importance which you can edit as you do your final revision. Find just a few comments to improve the manuscript.</p> <p>1. My most serious concern is the glaring absence of the stage of cancers for the patients – in table 1 or table 1&2. The stage would help readers better contextualize the time intervals reported given available evidence of association between patient and diagnostic intervals with stage of cancer at diagnosis, and stage at diagnosis is known to be associated with survival, an important outcome when dealing with cancers. While the histological characteristic of a tumour may greatly influence stage at diagnosis, the time to presentation and diagnostic intervals are very critical to stage. I would be glad to see the tumour stage distribution, especially that most studies in sub Saharan Africa report advanced stage at diagnosis.</p> <p>2. Page 12, line 29/30: “. . . 8.0% of them . . .” The “of them” could be deleted.</p> <p>3. Page 22, Line 40 – 47. The argument there is a critical one and may require substantiation with evidence from other studies to strengthen it.</p> <p>4. Page 23, line 3: “. . . medical expanses out of pocket”. Perhaps you meant Expenses not expanses!</p> <p>I am otherwise very impressed with your work.</p>
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REVIEWER	Scheel, John University of Washington
REVIEW RETURNED	22-Jul-2019

<p>GENERAL COMMENTS</p>	<p>Patient delay in Ethiopia</p> <p>The authors describe factors associated with patient and health system delays in women with newly diagnosed breast cancer in Addis Abada. Addressing delay is essential to improve breast cancer outcomes related in Africa. This manuscript used available healthcare data to obtain accurate dates, which is a strength compared to other studies from this region.</p> <p>General: Different font sizes throughout article is distracting.</p> <p>By only including women who made it to hospital, you may exclude many women with breast cancer who didn't make it this far. This is a limitation.</p> <p>Confusing to switch terms in the paper. For example, authors use diagnostic confirmation, then diagnostic interval,... Another example is the description of health centers in the methods (primary secondary and tertiary), yet then go on to say the lowest level in capital is health center, which isn't one of the general category options.</p> <p>Opportunities to strengthen message of manuscript with concise writing.</p> <p>Abstract: Cross-sectional analysis of prospectively corrected data? I think this is a hybrid retrospective (data collection from health centers) and cross sectional (survey) study.</p> <p>Strengths and limitations section. You state "retrospective nature..." Are you stating that your study is retrospective? Or other studies from Ethiopia are retrospective. If the former, then this conflicts with the abstract saying its prospective. If the latter, then you should delete this statement from this section.</p> <p>Methods Please state if written or verbal consent was obtained and in what language in the first sentence where consent is discussed. The following statements sounds like they just obtained verbal consent. Also, "in our rapid ethical assessment.." sounds like they are trying to hide something. Perhaps delete this statement. Also, illiterate participants can provide a mark in place of a signature and all IRBs I'm aware would require it for such an extensive look into one's medical records and conducting. survey. I defer to the IRB's authority from the author's institution.</p> <p>Clever to take the date of diagnosis from pathology report because, however this may not reflect when the patient received the diagnosis. Should describe this in limitations.</p> <p>Please state whether survey was administered in a semi private area and in what language (participant's preference).</p> <p>Results Too many tables and analysis. Did authors correct for multiple comparisons?</p>
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	<p>Advise writing the results section to be more concise.</p> <p>Discussion Your results also suggest that providers need education to recognize symptoms of breast cancer. A woman shouldn't have to present 4 times before receiving a referral. This should be synthesized into paragraph with patient awareness.</p> <p>An article in 2019 (Sharp et al) describe factors related to patient and health system factors related to diagnostic delays. It would help the discussion to describe overall trends in SSA that may assist other SSA countries tackling delay. Also, ABCDo trial suggests that health system related factors are more important than patient factors and it may strengthen article to frame accordingly.</p>
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REVIEWER	Deborah A CONSTANT University of Cape Town
REVIEW RETURNED	31-Jul-2019

GENERAL COMMENTS	<p>The study reports evidence from a multi-country study in Ethiopia that documents patient and diagnostic intervals for women recently diagnosed with breast cancer, as well as factors associated with prolonged time for these intervals. The study is of value to researchers working in this field and I recommend that it proceeds to publication given certain revisions</p> <p>General: there are occasional grammar mistakes suggesting the need for an editor: I have noted them here, but there may be need for final editing by an home language English hoe language speaker.</p> <p>Abstract: pg 2 ln 25: Please insert "that" into this sentence</p> <p>Introduction: Pg 4 Ln 26: "Long time" should be two words Pg 4 Ln 41-52: I would advise against naming the institutions. Rather describe the services Methods: Pg 6 Ln 21-41: Its not clear how participants were enrolled – identified from the registry and then approached at their appointment at the facility ?– please clarify this Pg 7 Ln 36: Insert a space where need inside the bracket Pg 8 Ln 16-32: this is unnecessary detail and can be omitted Pg 8 Ln 56: Pleae justify using cut-off for p-value at 0.25 Pg 9 ln 14: Patients were involved, as I understand – or is this not the case? – please clarify earlier in methods or edit this sentence</p> <p>Results: In general the results section repeats what is in the Tables. Please only report main findings of importance in the text, and omit Tables 3 and 4 as they do not contribute any additional value to the text Pg 10 ln 11: Insert a space before the brackets Pg 12 Ln 3: add "had" into the sentence Pg 12 ln 30: "most considered it as a simple breast swelling (36%)" – so 36% is not most – please be more clear/accurate in this reporting Pg 14 ln 8: You leave out the third category of HCF - please add this into the sentence Pg 14 Ln 20: Insert space into the bracket where needed</p>
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	<p>Pg 14 Ln 43-56: Please rewrite in the style of the previous section. Pg 15 Ln 14: “lab” should be laboratory Pg 17 Ln 52 replace “were “ with “was”</p> <p>Discussion This section is overly long. Each point is discussed in the same format, with a speculative argument offered to explain findings. Do not mention facilities by name Please can select main findings of interest to discuss. For example: 1) Pg 21 Ln 36..enlarge on what is understood from the literature around seeking help from traditional healers 2) Pg 22 Ln 13 What is understood regarding prolonged pathology turnaround time 3) Pg 22 Ln 30: What is known about levels of breast cancer knowledge among providers in health centres – if not in Ethiopia – then elsewhere in African settings Pg 24 Ln 33-37. In the sensitivity analysis, the shortest time interval for the patient interval is significantly different between included and excluded groups. Please comment directly about this in your discussion. Conclusion: The conclusion is weak. Please be a more specific, perhaps with a comparison to other similar settings</p> <p>Tables: Table 3 & 4 should be omitted Figures: The figures do not add any value and can be omitted</p>
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VERSION 1 – AUTHOR RESPONSE

Point by point response

Title: Time intervals experienced between first symptom recognition and pathologic diagnosis of breast cancer in Addis Ababa, Ethiopia- [bmjopen-2019-032228]

Dear Shona Reeves (Assistant Editor),

Thank you for the opportunity you gave us to revise and submit our manuscript entitled “Time intervals experienced between first symptom recognition and pathologic diagnosis of breast cancer in Addis Ababa, Ethiopia” to BMJ Open. We would also like to thank the editor and the reviewers for their insightful and helpful comments. We have incorporated these comments in the document, which have improved the quality of the manuscript. We have submitted the revised paper in track changes and clean copy online, and below are our point-by-point responses to the comments raised by the editor and reviewers.

Point by point response to editor’s comments

Comment #1: Please include any relevant statistical or quantitative results in the abstract results section.

Response: We have now included the adjusted odds ratio with its level of precision, and the 95% CI for the magnitude of patient and diagnostic delay (Page 2-3, paragraph 5, line 1 – 2, and 9 - 12)

Comment #2: Please state in your Abstract and Methods which healthcare facilities the participants were recruited from.

Response: We have now included the list of healthcare facilities included in the study in the Abstract (Page 2, paragraph 3, line 2-4) and Methods section (Page 6, paragraph 1, line 1 - 4)

Comment #3: In the patient and public involvement statement, please clarify that patients and the public were not involved in the design or planning of the study.

Response: We have now expanded the description and the new sentence on page 10, paragraph 1, line 1 reads “Neither patients nor the public were involved in the planning or designing of the study.”

Comment #4: We note that you have stated that all available patients who met the inclusion criteria were enrolled in this study. Please could you confirm in your cover letter that all participants provided informed consent to take part in the study. If less than 100% of the patients asked to take part agreed, please can you state how many patients were invited to participate in the study and how many accepted or declined the invitation.

Response: We have now included a description of this issue in the cover letter and the new sentence on page 1, paragraph 1, line 5-11 of the cover letter reads “We conducted this study to examine the time intervals experienced by women with breast cancer in Addis Ababa, from recognition of symptoms to pathologic diagnosis of the disease, using 444 women newly diagnosed with breast cancer in seven major healthcare facilities, capturing about 90% of the cases in Addis Ababa population-based cancer registry. Of the 444 patients approached 441 (99.3%) agreed and provided informed consent.”

We have made similar changes in the Methods section for clarity, and the new sentence on page 6, Paragraph 2, line 8 – 9 reads “Of the 444 patients approached 441 (99.3%) agreed and provided informed consent”.

Comment #5: We note that this manuscript only provides the results for part of the study outlined in your previously published study protocol. Please can you provide in your Methods section a full justification as to why this change was made to your study protocol and why the results are being split up into multiple papers.

Response: We have not made any changes in our study protocol. In this manuscript we do not provide results for all objectives stated in the published protocol because the project as described in the published protocol is designed to address distinct research questions using data collected at different point of study follow-up period. For example, we have not yet abstracted information on stage and treatment from Medical records for all patients as a substantial proportion of patients have not yet completed their first course of treatments. If we present all the results in one manuscript, the main message will be diffused and the manuscript will be unnecessarily widened.

Point by point response to reviewer comments

Reviewer 1 (Amos Deogratius Mwaka)

Comment #1: My most serious concern is the glaring absence of the stage of cancers for the patients – in table 1 or table 1&2. The stage would help readers better contextualize the time intervals reported given available evidence of association between patient and diagnostic intervals with stage of cancer at diagnosis, and stage at diagnosis is known to be associated with survival, an important outcome when dealing with cancers. While the histological characteristic of a tumour may greatly influence stage at diagnosis, the time to presentation and diagnostic intervals are very critical to stage. I would be glad to see the tumour stage distribution, especially that most studies in sub Saharan Africa report advanced stage at diagnosis.

Response: As we stated above, we have not yet abstracted stage information from medical records for all patients. However, given the known association between diagnostic delays and increased breast cancer mortality, and the lessons to be drawn for the Ethiopian health care system, we do feel that presenting information about delays is meaningful.

Comment #2: Page 12, line 29/30: “. . . 8.0% of them . . .” The “of them” could be deleted.

Response: We have now corrected it (Page 13, paragraph 2, line 4)

Comment #3: Page 22, Line 40 – 47. The argument there is a critical one and may require substantiation with evidence from other studies to strengthen it.

Response: We have now substantiated our argument, and the new sentences on page 26, paragraph 2, line 1-4 reads “In contrast, patients who sought medical consultation after progression of symptom(s) had a lower likelihood of diagnostic delays. This is likely because more extensive breast symptoms or signs may have led to prompt referral of patients to diagnostic centers as reported elsewhere [48, 49].”

Comment #4: Page 23, line 3: “. . . medical expenses out of pocket”. Perhaps you meant Expenses not expanses!

Response: Apologies for the typo.

Reviewer: 2 (John)

General:

Comment #1: Different font sizes throughout article is distracting.

Response: Apologies for the typo. We have now checked for consistency and we used font size of 12.

Comment #2: By only including women who made it to hospital, you may exclude many women with breast cancer who didn't make it this far. This is a limitation.

Response: We have now included this in the limitation section and the new sentences on page 28 - 9, paragraph 1, line 24 - 27 reads "Fifth, the study was a hospital-based study, and it might not capture the experience of women who solely seek care elsewhere (eg., traditional or spiritual healers) or women who are seen only at primary care facilities and do not get to the hospital."

Comment #3: Confusing to switch terms in the paper. For example, authors use diagnostic confirmation, then diagnostic interval, ... Another example is the description of health centers in the methods (primary secondary and tertiary), yet then go on to say the lowest level in capital is health center, which isn't one of the general category options.

Response: Apologies for not using consistent terms. We have now rearranged the terms to avoid the confusion for diagnostic delay versus diagnostic confirmation (Page 4, paragraph 2, line 2-6), and health center (Page 5 - 6, paragraph 3, line 3-12).

Comment #4: Opportunities to strengthen message of manuscript with concise writing.

Response: We have now improved the write up of the manuscript

Abstract:

Comment #5: Cross-sectional analysis of prospectively collected data? I think this is a hybrid retrospective (data collection from health centers) and cross sectional (survey) study.

Response: Thank you. This was a cross-sectional study whose data are obtained from the incident breast cancer patients recruited from the 7 major health facilities. We have now clarified the wording and the new sentence on page 2, paragraph 2, line 1 reads "Design: Cross sectional study"

Strengths and limitations section.

Comment #6: You state "retrospective nature..." Are you stating that your study is retrospective? Or other studies from Ethiopia are retrospective. If the former, then this conflicts with the abstract saying its prospective. If the latter, then you should delete this statement from this section.

Response: Retrospective refers to the nature of the questions intended to ascertain the date of first symptoms recognition and first date of medical consultation as answer to these questions depend on participants recall. Otherwise, our study is not retrospective in nature.

Methods

Comment #7: Please state if written or verbal consent was obtained and in what language in the first sentence where consent is discussed. The following statements sounds like they just obtained verbal consent. Also, "in our rapid ethical assessment." sounds like they are trying to hide something.

Perhaps delete this statement. Also, illiterate participants can provide a mark in place of a signature and all IRBs I'm aware would require it for such an extensive look into one's medical records and conducting survey. I defer to the IRB's authority from the author's institution.

Response: Thank you. We now have rephrased the paragraph to improve its clarity which reads "Prior to the interview, study participants were informed about the purpose of the study, their right to refuse to participate or withdraw at any point during the study period. Then verbal consent was obtained from the study participants using Amharic, national working language. The decision to use verbal consent was made by the rapid ethical assessment we have done to design the consent process of the project [ref. 22]. Based on this assessment, we found that most of the participants were not comfortable providing written consent. Accordingly, we decided to use verbal consent, which was approved by the Institutional Review Board (018/17/SPH) of the College of Health Science of Addis Ababa University." (Page 7, paragraph 1, line 1-9)

Comment #8: Clever to take the date of diagnosis from pathology report because, however this may not reflect when the patient received the diagnosis. Should describe this in limitations.

Response: We have now described it in the limitations and the new sentence on Page 28, paragraph 1, line 19 - 20 reads "Second, the date of diagnosis was taken from the pathology report, however, this may not reflect when the patient received the diagnosis."

Comment #9: Please state whether survey was administered in a semi private area and in what language (participant's preference).

Response: We have now included a description, and on page 8, paragraph 2, line 4-6 reads "Trained nurses interviewed the eligible women individually in a semiprivate room in Amharic, when they presented for treatment"

Results

Comment #10: Too many tables and analysis. Did authors correct for multiple comparisons?

Response: We have now cut some of the texts and tables.

Comment #11: Advise writing the results section to be more concise.

Response: We have now improved the results section.

Discussion

Comment #11: Your results also suggest that providers need education to recognize symptoms of breast cancer. A woman shouldn't have to present 4 times before receiving a referral. This should be synthesized into paragraph with patient awareness.

Response: We have now included a description, and on page 24, paragraph 1, line 10 - 11 reads "In addition to the patients, our findings suggest the presence of providers' oversight of initial breast cancer symptoms leading to delayed referral of the patients for confirmation. These findings underscore the need for programs to enhance knowledge about breast cancer symptoms among the general public and healthcare providers"

Comment #12: An article in 2019 (Sharp et al) describe factors related to patient and health system factors related to diagnostic delays. It would help the discussion to describe overall trends in SSA that may assist other SSA countries tackling delay. Also, ABCDo trial suggests that health system related factors are more important than patient factors and it may strengthen article to frame accordingly.

Response: Thank you for sharing these important articles. We now cited these works and have drawn some materials from these articles in revising our paper. E.g., on page 24, paragraph 1, line 7 - 10 reads "A substantial proportion of patients either disregarded the clinical importance of the first symptoms or attributed them to other non-specific conditions. Sharp et al found that "knowledge deficit a modifiable factor" as a main barrier to early detection of breast cancer in Uganda [ref. 12].

Reviewer: 3 (Deborah A CONSTANT)

Comment #1: General: there are occasional grammar mistakes suggesting the need for an editor: I have noted them here, but there may be need for final editing by an home language English hoe language speaker.

Response: The document has been edited by a native English Speaker, Mr. John M. Daniel of the American Cancer Society

Introduction:

Comment #2: Pg 4 Ln 26: "Long time" should be two words

Response: Apology for the typo. The word is now replaced by prolonged diagnostic interval due to the revision made in this sentence (Page 4, Paragraph 2, line 5-6)

Comment #3: Pg 4 Ln 41-52: I would advise against naming the institutions. Rather describe the services

Response: We have now amended according the reviewer's recommendation (Page 4, paragraph 3, line 2-4)

Methods:

Comment #4: Pg 6 Ln 21-41: It's not clear how participants were enrolled – identified from the registry and then approached at their appointment at the facility?– please clarify this

Response: We have now included a description on page 6, paragraph 2, line 1-8 and reads "On daily basis, the research assistant assigned in each of the selected 7 health facilities identify eligible women while they were waiting to be seen by their physician by looking at the medical chart for their place of residency and their pathology reports for the date of diagnosis. To avoid duplication, the

medical chart of the recruited woman was coded at its top cover and plastered by yellow color. Concurrently, the monthly report of Addis Ababa cancer registry cancer notification form was assessed to identify eligible women who were not captured in the seven health facilities, and contacted via their phone for their place of follow-up and convenient date of meeting for our interview. Of the 444 patients approached 441 (99.3%) agreed and provided informed consent”

Comment #5: Pg 7 Ln 36: Insert a space where need inside the bracket

Response: Apologies for the typo. We have now corrected it (Page 8, paragraph 3, line 2)

Comment #6: Pg 8 Ln 16-32: this is unnecessary detail and can be omitted

Response: We have omitted according the reviewer’s recommendation

Comment #7: Pg 8 Ln 56: Please justify using cut-off for p-value at 0.25

Response: We have now included a justification for using cut-off for p-value at 0.25, and the new sentence on page 9, paragraph 1, line 11-12 reads “The cut-off for p-value at 0.25 for variable selection to multivariable logistic regression is supported by different literatures”

Comment #8: Pg 9 Ln 14: Patients were involved, as I understand – or is this not the case? – please clarify earlier in methods or edit this sentence

Response: We meant to say neither patients nor the public were involved in the planning or designing the study. We have now state this “Neither patients nor the public were involved in the planning or design of the study.” on page 10, paragraph 1, line 1.

Results:

Comment #9: In general, the results section repeats what is in the Tables. Please only report main findings of importance in the text, and omit Tables 3 and 4 as they do not contribute any additional value to the text

Response: We have now cut some of the texts and tables. We thought that table 3 and 4 (the multivariable analysis) are important to the readers to understand which variables are include in the logistic regression model and the level of significance. Hence, we now present the information in these tables in supplemental table 3.

Comment #10: Pg 10 Ln 11: Insert a space before the brackets

Response: We have now corrected this (Page 11, paragraph 1, line 3)

Comment #11: Pg 12 Ln 3: add “had” into the sentence

Response: Apologies for the typo. We have now corrected it (page 13, paragraph 1, line 1)

Comment #12: Pg 12 Ln 30: “most considered it as a simple breast swelling (36%)” – so 36% is not most – please be more clear/accurate in this reporting

Response: We have now corrected this (Page 13, paragraph 2, line 4-5)

Comment #13: Pg 14 Ln 8: You leave out the third category of HCF - please add this into the sentence

Response: We have now included it (Page 15, paragraph 1, line 4)

Comment #14: Pg 14 Ln 20: Insert space into the bracket where needed

Response: We have now corrected this (Page 15, paragraph 2, line 1)

Comment #15: Pg 14 Ln 43-56: Please rewrite in the style of the previous section.

Response: We have now rearranged description (Page 15, paragraph 3, line 5 - 10)

Comment #16: Pg 15 Ln 14: “lab” should be laboratory

Response: Apologies for the typo. We have now corrected this (Page 15-16, paragraph 3, line 7)

Comment #17: Pg 17 Ln 52 replace “were “ with “was”

Response: Apologies for the typo. We have now corrected this (Page 20, paragraph 1, line 7)

Discussion

Comment #18: This section is overly long. Each point is discussed in the same format, with a speculative argument offered to explain findings. Do not mention facilities by name Please can select main findings of interest to discuss. For example:

1) Pg 21 Ln 36..enlarge on what is understood from the literature around seeking help from traditional healers

2) Pg 22 Ln 13 What is understood regarding prolonged pathology turnaround time

3) Pg 22 Ln 30: What is known about levels of breast cancer knowledge among providers in health centres – if not in Ethiopia – then elsewhere in African settings

Response: We have now shortened the discussion, and omitted names of the facilities (page 23, paragraph 2, line 3 – 5)

Comment #19: Pg 24 Ln 33-37. In the sensitivity analysis, the shortest time interval for the patient interval is significantly different between included and excluded groups. Please comment directly about this in your discussion.

Response: We have now elaborated the justification on page 28, paragraph 1, line 8 - 15 and reads "We additionally performed a sensitivity analysis and found no statistically significant difference in the proportions of women across the different cut points of time intervals, except for those who waited for less than a month and more than a year before consultation. This may be because patients who waited consultation for more than a year are less likely to remember the date of first symptom recognition than those who consulted within a year of their symptom recognition. Inclusion of these patients in the analysis pooled the estimates across the different cut points of time intervals (<30 days, 31 - 90 days, 91 - 180 days, 180 - 365 days and >365 days) towards the highest waiting interval (>365 days), while exclusion of these patients from the analysis pooled the estimates towards the lowest waiting interval (<30 days)."

Comment #20: Conclusion: The conclusion is weak. Please be a more specific, perhaps with a comparison to other similar settings

Response: We now have improved it, on page 29, paragraph 1, line 1 -8 reads "In this multicenter study, we have found that substantial proportions of women with breast cancer in Addis Ababa have prolonged patient and diagnostic intervals attributed to modifiable patient and health care provider factors such as poor knowledge about breast cancer, downplaying the importance of the first breast cancer symptoms, preference of traditional and spiritual remedies, provider's oversight of the first symptoms and delayed referral of women for confirmation with suggestive of breast cancer symptoms. These underscore the need for public health programs to increase knowledge about breast cancer among the general population and health care providers in the city in order to reduce the morbidity and mortality associated with the disease."

Tables:

Comment #21: Table 3 & 4 should be omitted

Response: We have omitted Tables 3 & 4 from the main manuscript. However, we feel that the multivariable logistic regression analysis results may be of interest to many readers in order for readers to understand which variables are included in the model and the level of significance. We thus have moved these tables to the supplemental materials.

Figures:

Comment #22: The figures do not add any value and can be omitted

Response: We have now omitted the figures.

VERSION 2 – REVIEW

REVIEWER	Deborah Constant University of Cape Town
REVIEW RETURNED	02-Sep-2019
GENERAL COMMENTS	The authors have addressed most of the reviews concerns in this revised version. However some new text is grammaticality incorrect (pg 6, ln 35 - "identify" should be in past tense), or new text has been inserted and now there are repeats (pg 7, ln 8 & 10)

	The manuscript needs to be edited by an native english speaker for other minor grammatical mistakes prior to being acceptable for publication
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VERSION 2 – AUTHOR RESPONSE

Point by point response

Title: Time intervals experienced between first symptom recognition and pathologic diagnosis of breast cancer in Addis Ababa, Ethiopia (bmjopen-2019-032228.R1)

Dear Shona Reeves (Assistant Editor),

Thank you for the opportunity to revise our paper entitled “Time intervals experienced between first symptom recognition and pathologic diagnosis of breast cancer in Addis Ababa, Ethiopia” to BMJ Open. We would also like to thank the reviewers for their insightful and helpful comments. We have incorporated the reviewer’s comments. We have submitted the revised paper online, and below are our point-by-point responses to the comments raised by the editor.

Point by point response to Reviewer # 3 (Deborah Constant) comments:

Comment #1: The authors have addressed most of the reviews concerns in this revised version. However, some new text is grammaticality incorrect (pg 6, ln 35 - "identify" should be in past tense)

Response: Apology for the typo. We have now corrected it (Page 7, paragraph 1, line 2)

Comment #2: new text has been inserted and now there are repeats (pg 7, ln 8 & 10)

Response: Apology for the typo. We have now corrected it (Page 8, paragraph 1, line 4)

Comment #3: The manuscript needs to be edited by an native English speaker for other minor grammatical mistakes prior to being acceptable for publication

Response: The document has now been edited by a native English Speaker, Mr. John M. Daniel of the American Cancer Society